Software Requirements Specification

for

<FlatFindr>

Version 1.0 approved

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<Team 6>

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# Introduction

## Purpose

<Identify the product whose software requirements are specified in this document, including the revision or release number. Describe the scope of the product that is covered by this SRS, particularly if this SRS describes only part of the system or a single subsystem.>  
  
This is the software requirements specification for FlatFindr revision 0 version number 1.0. This document covers only the user interaction with the system and the features of the system but not the infrastructure or server side communication or implementations of the system.

## Document Conventions

<Describe any standards or typographical conventions that were followed when writing this SRS, such as fonts or highlighting that have special significance. For example, state whether priorities for higher-level requirements are assumed to be inherited by detailed requirements, or whether every requirement statement is to have its own priority.>

## Intended Audience and Reading Suggestions

<Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers. Describe what the rest of this SRS contains and how it is organized. Suggest a sequence for reading the document, beginning with the overview sections and proceeding through the sections that are most pertinent to each reader type.>  
  
This document is intended for the developers and document writers (Patrick Indermühle, Bernhard Zahnd, Maelle Boughattas and Michael Baur), for the customer (FlatFoundrs), the project supervisors (Haidar Osman, Claudio Corrodi, Manuel Leuenberger) and developers of other projects that are interested in the requirements of FlatFindr.

## Product Scope

<Provide a short description of the software being specified and its purpose, including relevant benefits, objectives, and goals. Relate the software to corporate goals or business strategies. If a separate vision and scope document is available, refer to it rather than duplicating its contents here.>

The product in question is FlatFindr, on online website for finding rooms and studios free for renting where you can also advertise your own free rooms you want to rent to others. Its most important aspect is the user-interface as this is what FlatFindr's biggest benefit is.

## References

<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document. Provide enough information so that the reader could access a copy of each reference, including title, author, version number, date, and source or location.>  
  
Initial project description from the customer : https://github.com/scg-unibe-ch/ese2016/wiki/Project-Description  
  
Documentation of the system as is : https://github.com/scg-unibe-ch/ese2016-team6/tree/master/documentation

# Overall Description

## Product Perspective

<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the SRS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. A simple diagram that shows the major components of the overall system, subsystem interconnections, and external interfaces can be helpful.>

The product is a standalone software that requires maintenance in order to expand on its features. This is required in order for FlatFindr to remain competitive in the market.

## Product Functions

<Summarize the major functions the product must perform or must let the user perform. Details will be provided in Section 3, so only a high level summary (such as a bullet list) is needed here. Organize the functions to make them understandable to any reader of the SRS. A picture of the major groups of related requirements and how they relate, such as a top level data flow diagram or object class diagram, is often effective.>  
  
The product allows users to create advertisements for their own rooms, inspect rooms that others have created advertisements for on FlatFindr, schedule meetings with other room owners for room visits and contact the owner of a room.

## User Classes and Characteristics

<Identify the various user classes that you anticipate will use this product. User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. Describe the pertinent characteristics of each user class. Certain requirements may pertain only to certain user classes. Distinguish the most important user classes for this product from those who are less important to satisfy.>  
  
There are multiple types of users. Users that are not logged in and Users that are logged into their FlatFindr account. Users that are logged into their account can schedule meetings with other room owners and can also create advertisements for their own rooms. Users that are not logged in can still see rooms that are advertised on FlatFindr, but cannot contact logged in users or schedule room visits.

## Operating Environment

<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist.>

The software is written in java and runs on a server. It creates a webpage that users can visit with their browsers. Operation system and platform can be chosen freely within reason.

## Design and Implementation Constraints

<Describe any items or issues that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer’s organization will be responsible for maintaining the delivered software).>

It is important that the software functions with all major browsers (Chrome, Internet Explorer, Opera, Firefox, Safari) and that response times do not keep users waiting. Care must be taken to not brake any regulations concerning the advertising of rooms for renting over the internet.

## User Documentation

<List the user documentation components (such as user manuals, on-line help, and tutorials) that will be delivered along with the software. Identify any known user documentation delivery formats or standards.>  
  
The Documentation of the system can be aquired at https://github.com/scg-unibe-ch/ese2016-team6/tree/master/documentation

## Assumptions and Dependencies

<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>  
  
In this document we are going to assume that the software will remain mostly written in java and will continue to user html, javascript and CSS to design the website.

# External Interface Requirements

## User Interfaces

<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., help) that will appear on every screen, keyboard shortcuts, error message display standards, and so on. Define the software components for which a user interface is needed. Details of the user interface design should be documented in a separate user interface specification.>  
  
  
On the Homepage, the user can see a list of the newest advertisements. clicking on the advertisements moves the user to the advertisement screen  
On the advertisement screen, the user can see all relevant data about the room in question. If the user is logged in the user can send enquiries for visits to the owner of the room or contact the owner. If the user is not logged in the buttons to contact the owner or sending enquiries are replaced by buttons that send the user to the login screen.  
  
On the search screen, the user can select the search requirements. The user can search of rooms and studios separately, define a certain radius from where to search for rooms and set an upper price limit for rooms.  
  
On the Login screen, the user can type in the email address and password and click on the login button to login. There is also a button to sign up, which carries the user to the sign up screen.  
  
On the sign up screen, the user can enter the first name, last name, password, email address and gender and click on the sign up button in order to create an account.  
  
On the header tile, which is visible from all screens, there is a button with the name of the website FlatFindr written on it that moves to user to the homepage. There is also a seach button. clicking on the search button moves the user to the search screen. If the user is not logged in there will be a login button on the top right that transports the user to the login screen. If the user is logged in there will instead be a drop down list when the user hovers the mouse over the profile picture on the top left. This drop down list contains buttons that can transport the user to the addplacement screen, the myrooms screen, the message screen, the enquiries screen the schedule screen, the alerts screen, the profile screen and a logout button.

## Hardware Interfaces

<Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware, and communication protocols to be used.>  
  
The software will interact with the hardware through the java library. The hardware must be compatible with java.

## Software Interfaces

<Describe the connections between this product and other specific software components (name and version), including databases, operating systems, tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Refer to documents that describe detailed application programming interface protocols. Identify data that will be shared across software components. If the data sharing mechanism must be implemented in a specific way (for example, use of a global data area in a multitasking operating system), specify this as an implementation constraint.>  
  
The software has a dependency on Java for its main server side logic and uses javascript, CSS and html for the website interface. Software compatibility with the database language has to be assured

## Communications Interfaces

<Describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, electronic forms, and so on. Define any pertinent message formatting. Identify any communication standards that will be used, such as FTP or HTTP. Specify any communication security or encryption issues, data transfer rates, and synchronization mechanisms.>  
  
The Software must be capable of recognizing email addresses, creating websites that can be opened by a browser. Users must be able to send their passwords and other personal data in encrypted format.

# System Features

<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>

## System Feature 1

<Don’t really say “System Feature 1.” State the feature name in just a few words.>

4.1.1 Description and Priority

<Provide a short description of the feature and indicate whether it is of High, Medium, or Low priority. You could also include specific priority component ratings, such as benefit, penalty, cost, and risk (each rated on a relative scale from a low of 1 to a high of 9).>

4.1.2 Stimulus/Response Sequences

<List the sequences of user actions and system responses that stimulate the behavior defined for this feature. These will correspond to the dialog elements associated with use cases.>

4.1.3 Functional Requirements

<Itemize the detailed functional requirements associated with this feature. These are the software capabilities that must be present in order for the user to carry out the services provided by the feature, or to execute the use case. Include how the product should respond to anticipated error conditions or invalid inputs. Requirements should be concise, complete, unambiguous, verifiable, and necessary. Use “TBD” as a placeholder to indicate when necessary information is not yet available.>

<Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.>

REQ-1:

REQ-2:

## Creating advertisements

4.1.1 Description and Priority

The ability of users to create advertisements for the room they want to lend to others.  
Priority : 9

4.1.2 Stimulus/Response Sequences

Logged in users must be able to enter the create-advertisement-screen where the system displays a screen that allows the user to enter the relevant data for the room. When the user is done, a confirmation button can be pressed that will create an entry in the data base for this room.

4.1.3 Functional Requirements

REQ-LoginCheck: The software must be capable of distinguishing logged in users and users that are not logged in

REQ-CAS-Entry: There must be a way for users to enter the create-advertisement-screen

REQ-CAS-Input: The create-advertisement-screen must have textboxes, choice boxes or other input interfaces that can collect data for all the relevant data that the advertisement requires.

4.1.4 Non-Functional Requirements

REQ-DataBase-Consistency: The user must not be able to create an invalid entry. In this context this means that the user must not be able to create an advertisement that does not haven the minimum necessary data.

## Seeing advertisements

4.1.1 Description and Priority

The ability of users to see advertisements they or other users have created.  
Priority : 9

4.1.2 Stimulus/Response Sequences

All users must be able to see advertisements other users have created.

4.1.3 Functional Requirements

REQ-FetchAdd: The software must be able to send the information of the advertisements entries to the user.

REQ-FetchAdd-Display: The software must be able to display to the user the data of the advertisements that were sent to the user.

4.1.4 Non-Functional Requirements

REQ-FetchAdd-Latency: The software must be able to send the advertisements within 10 seconds in order to not keep the user waiting.

# Other Nonfunctional Requirements

## Performance Requirements

<If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.>  
  
All client to server requests must be completed within 10 seconds to make sure users are not kept waiting too long when moving around the website.

## Safety Requirements

<Specify those requirements that are concerned with possible loss, damage, or harm that could result from the use of the product. Define any safeguards or actions that must be taken, as well as actions that must be prevented. Refer to any external policies or regulations that state safety issues that affect the product’s design or use. Define any safety certifications that must be satisfied.>

It is important that regular backups of private user data is made so that in case of a system failure the data can be restored. On top of that, the system must be designed in a way so that no invalid data entries can be made and inserted into the data base.

## Security Requirements

<Specify any requirements regarding security or privacy issues surrounding use of the product or protection of the data used or created by the product. Define any user identity authentication requirements. Refer to any external policies or regulations containing security issues that affect the product. Define any security or privacy certifications that must be satisfied.>

It is important that all private data is secured against hacking and theft attempts at all times.

## Software Quality Attributes

<Specify any additional quality characteristics for the product that will be important to either the customers or the developers. Some to consider are: adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, reusability, robustness, testability, and usability. Write these to be specific, quantitative, and verifiable when possible. At the least, clarify the relative preferences for various attributes, such as ease of use over ease of learning.>  
  
The software provides a user interface in order to create advertisements (create data entries) and see advertisements of others (search the data base for certain data entries). It is important that the user interface part of the software remains uncoupled from the data base handling part of the software so that either can be changed without the other. On top of that, since the product will receive maintenance for quite some time from now, it is important that readability of the code remains a strong point of the software.

## Business Rules

<List any operating principles about the product, such as which individuals or roles can perform which functions under specific circumstances. These are not functional requirements in themselves, but they may imply certain functional requirements to enforce the rules.>

Only logged in users can create advertisements, schedule meetings with room owners or contact owners of rooms

# Other Requirements

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

For legal reasons it is important that confidentiality of the private user data is guaranteed. The data base where this data is saved must be secured.

Appendix A: Glossary

<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.>

Appendix B: Analysis Models

<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams.>

Appendix C: To Be Determined List

<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>

Source: http://www.frontiernet.net/~kwiegers/process\_assets/srs\_template.doc